

REMARKS

In the Office Action, claims 56-75 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Roth et al. (WO 90/00596) in view of Hildreth (U.S. Publication No. 2002/0128227) and further in view of Shin et al. (Microbes and Infection, 2001, 3, pp. 755-761), Norkin (Advanced Drug Delivery Reviews, 2001, 49, pp. 301-315) and Duncan et al. (Cellular Microbiology, 2002, 4(12), pp. 783-791).

This rejection is respectfully traversed, for at least the following reasons.

With regard to Roth et al., this reference describes antiviral compositions. In contrast to Roth et al., the cycloglycans recited in present claim 56 are used in a method for reducing the invasion and infection of mammalian cells by certain pathogenic intracellular bacteria. A person of ordinary skill in the art would have known that compositions for treating bacterial diseases cannot generally be used for treating diseases caused by viruses, and vice versa. Thus, taken alone or in the cited combination, Roth et al. does not teach or suggest using cycloglycans for reducing the invasion and infection of mammalian cells by certain pathogenic intracellular bacteria.

Furthermore, the present claims are directed to methods for administering cycloglycans to inhibit the invasion and infection of mammalian cells by certain bacteria. In contrast to Roth et al., the present cycloglycans are not used to treat (or fight) an already existing infection but to prevent or inhibit such an infection.

Hildreth describes methods of reducing the risk of transmission of sexually transmitted pathogens. In contrast to Hildreth, the bacteria relevant to the present methods are not sexually transmitted and are intracellular bacterium.

In particular, Hildreth shows the effectiveness of [beta]-Cyclodextrin against Chlamydia infections (see Example 5 of the reference). A person of ordinary skill in the art would have known that Chlamydia is not an intracellular bacterium, and thus is not equivalent to E.coli, Listeria and Salmonella. In other words, the skilled person would not have reasonably expected that compositions useful for treating Chlamydia would also be useful for treating intracellular pathogenic infections as recited in the present claims. Furthermore, all of the other reference examples relate to sexually transferred viral rather than bacterial diseases. Thus, taken alone or

in the cited combination, Hildreth does not teach or suggest using cyclodextrins for the treatment of intracellular pathogenic infections as recited in the present claims.

Applicants also note that the cycloglycans of the present claims are administered orally or per os whereas the compositions taught by Hildreth are topically administered in order to “protect” epithelial cells (see, e.g., claims 11-16 of the reference). This teaching is completely different from the teaching of the present invention and therefore does not make obvious the teaching of the present invention even if Hildreth is combined with Roth et al.

With regard to the additional references cited by the Examiner (i.e. Shin et al., Norkin, and Duncan et al.), these references do not remedy the serious deficiencies of Roth et al. and Hildreth.

Finally, Applicants note that the Roth et al. reference was also cited in the International Search Report and during prosecution of the corresponding PCT application and European application, respectively. The corresponding European claims were found patentable over Roth et al. (see European patent EP1469866B1).

In view of the above, Applicants respectfully request reconsideration and withdrawal of this rejection.

CONCLUSION

In view of the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order. Such action is earnestly solicited.

In the event that there are any questions related to this response, or the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney at the below-listed telephone number concerning such questions so that prosecution of this application may be expedited.

Respectfully submitted,

By:



Lisa E. Stahl, Ph.D.

Registration No. 56,704

BACON & THOMAS PLLC
625 Slaters Lane, Fourth Floor
Alexandria, Virginia 22314-1176
703.683.0500

Date: February 28, 2011